

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 35-48 are pending in the present application, Claims 35-38 having been amended, Claims 40-48 having been added, Claims 37 and 38 having been withdrawn, and Claims 20, 21, 23-27, 29, 31, and 32 having been canceled without prejudice or disclaimer. New Claims 40-48 are based on features previously presented in Claims 20-32. Support for the present amendment is believed to be self-evident from the originally filed specification. Applicants respectfully submit that no new matter is added and that no new issues are raised. Accordingly, it is respectfully requested that the present amendment be entered.

In the outstanding Office Action, Claims 20, 23, 27, 29, and 31 were rejected under 35 U.S.C. §112, second paragraph; Claims 20, 23, 27, 29, 31, 35, 36, and 39 were rejected under 35 U.S.C. §112, second paragraph; Claim 20 was rejected under 35 U.S.C. §102(b) as anticipated by Hooper et al. (U.S. Patent No. 3,297,544, hereinafter Hooper), or in the alternative, under 35 U.S.C. §103(a) as obvious over Hooper in view of Glazman et al. (U.S. Patent No. 5,412,701, hereinafter Glazman) while relying on Feinroth (U.S. Patent No. 5,182,077) for evidence; and Claims 20, 23, 27, 29, 31, 35, 36, and 39 were rejected under 35 U.S.C. §103(a) as unpatentable over Travelli (U.S. Patent No. 4,720,370) in view of Hooper, relying upon Walter (U.S. Patent No. 3,913,481) and Parker et al. (U.S. Patent No. 6,520,123, hereinafter Parker) for evidence.

Applicants respectfully submit that the rejections of Claims 20, 21, 23-27, 29, 31, and 32 are moot in view of their cancellation.

Applicants respectfully submit that the rejection of Claims 35, 36, and 39 under 35 U.S.C. §112, second paragraph, regarding the use of “stainless” and “ductile,” is overcome. The present amendment removes these terms from the claims.

Applicants respectfully traverse the rejection of Claim 35 as unpatentable over Travelli and Hooper. Claim 35 recites,

A method for producing a nuclear fuel, comprising:

- producing wires, more than half of a number of the wires being wires of fissile material;
- producing at least one assembly by stranding, braiding or weaving said wires together;
- disposing the assembly in a casing; and
- deforming the casing with the assembly disposed therein so that the casing compresses the wires.

A proper combination of Travelli and Hooper does not disclose or suggest every element of Claim 35.

Hooper describes a method a constructing a fuel element which is particularly adaptable to manufacture by processes involving automation.¹ Such a method also allows for having a fuel element with a fixed heat transfer surface.² The structure in Hooper regarded as wires by the Office Action is contained in an outer tube. This outer tube *is not deformed in order to compress the wires*. As shown in Hooper's Fig. 1, there is a gap between the outer wires and the inside of the outer tube.

The casing of the invention defined by Claim 35 is not the same as what is described at page 5 of the Office Action involving tubular former 2 of Hooper. The wires are in the casing of Claim 1 (see, "the assembly *in* a casing"). The structure of Hooper regarded as wires is not inside tubular former 2. Rather, the structure regarded as wires are positioned on the outer wall of the tubular former.

Furthermore, an assembly of stranded, braided, or weaved wires is not disposed in cladding material 1a of Hooper. The cladding material 1a only includes structure of

¹ Hooper, col. 1, lines 13-16.

² Hooper, col. 1, line 19.

compressed particles 1b that can be regarded as one wire. The cladding material 1a does not include an assembly of **wires** as described in Claim 35. Even considering the welding or brazing of cladding material 1a to former 2, the resulting structure does not have an assembly of wires disposed inside of it because the structure regarded as wires by the Office Action is still not inside former 2.

Furthermore, there is no disclosure in Hooper of deforming cladding material 1a.

Thus, Hooper does not describe the claimed “deforming the case with the assembly disposed therein,” wherein “assembly” is defined in Claim 35 as having wires stranded, weaved, or braided together.

Travelli describes a nuclear fuel-containing plate structure for a nuclear reactor. In Travelli, the wires are not braided, weaved, or stranded together. Moreover, Travelli does not disclose an assembly of wires that is contained in a casing, wherein “assembly” is earlier defined in the claim to have wires stranded, weaved, or braided together. In Travelli, the wire-like fissionable fuel members are **separately confined in separate recesses**.³ Thus, Travelli does not lead a person of ordinary skill in the art to insert a plurality of wires into only one recess.

Furthermore, with respect to coextrusion described at col. 4, lines 56-62 of Travelli, there is no “assembly,” as defined in Claim 35 as having wires stranded, weaved, or braided together, disposed in matrix plate member 12. Thus, Travelli does not describe the claimed “deforming the case with the assembly disposed therein.”

A person of ordinary skill in the art could not properly combine Travelli and Hooper to arrive at the invention defined by Claim 35. In the present case, absent improper hindsight reconstruction based on Applicant’s claims, one of ordinary skill in the art would not have found it obvious to have a step of “deforming the casing with the assembly disposed therein

³ Travelli, claim 1, Fig. 1, col. 5, lines 63-65 and col. 6, lines 41-42.

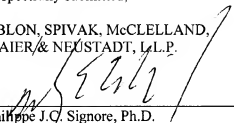
so that the casing compresses the wires," wherein the "assembly" is earlier defined in the claim to have wires stranded, weaved, or braided together.

In view of the above-noted distinctions, Applicants respectfully submit that Claim 35 (and any claim dependent thereon) patentably distinguishes over Travelli and Hooper, when taken in proper combination.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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